

521,005
Rec'd PCT/PTO 07 JAN 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 January 2004 (15.01.2004)

PCT

(10) International Publication Number
WO 2004/005338 A1

- (51) International Patent Classification⁷: C07K 14/47, (74) Agent: VOSSIUS & PARTNER; Siebertstrasse 4, 81675 Munich (DE).
16/00, G01N 33/53, A61K 39/00, 38/00
- (21) International Application Number: PCT/EP2003/006930
- (22) International Filing Date: 30 June 2003 (30.06.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/394,486 8 July 2002 (08.07.2002) US
60/438,602 7 January 2003 (07.01.2003) US
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SECRETED PEPTIDES

(57) Abstract: The invention provides secreted active peptides, methods and compositions for making such peptides, and methods of using the peptides in detection assays, for disease diagnosis, for disease treatment and for drug development, in particular for microbial or viral infections.

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Figure 1

MKTQRDGHSLGRWSLVLLLLGLVMPLAIIAQVLSYKEAVLRAIDGINQRSSDANLYRLLD 60
LDP RPTMDGDPDT PKPV SFTVKETVCPR TTQQSPEDCDFKKDGLVKRC CMGT VTLNQARGS 120
FDISCDKDNKR FALLGDEFRKS KEKIGKEFKRIVQRIKDFLRNLVPRTES 170

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Figure 2

1RBP

Seq ID 6

CLGIGSCNDFAGCGYAVVCFW---

CMGTVTNLNQARGS-FDISCDKDNK

: :*:*. : : *

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Figure 3

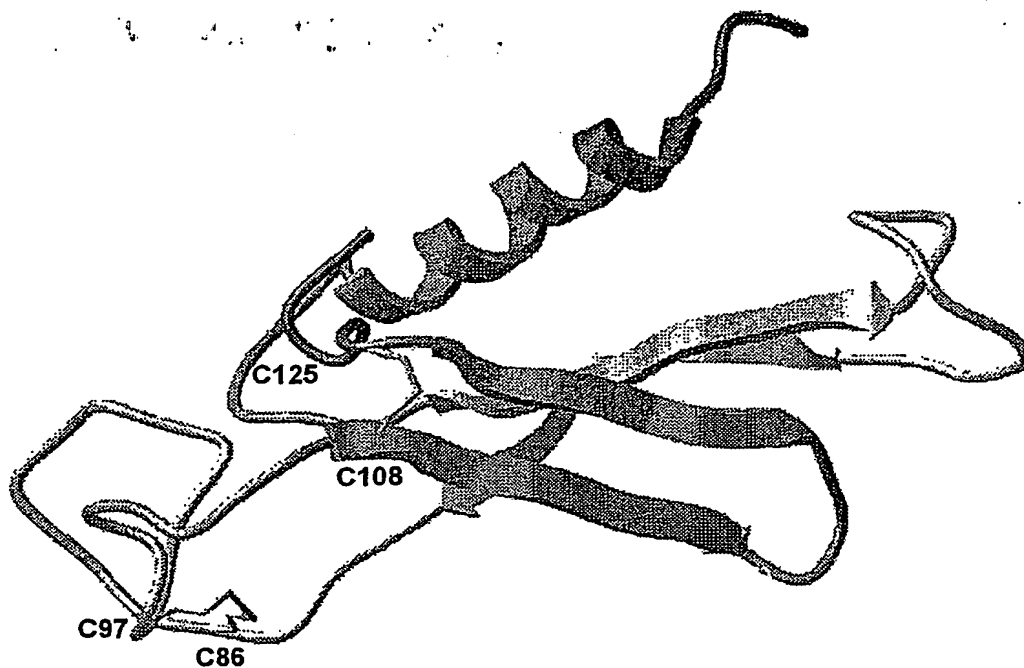
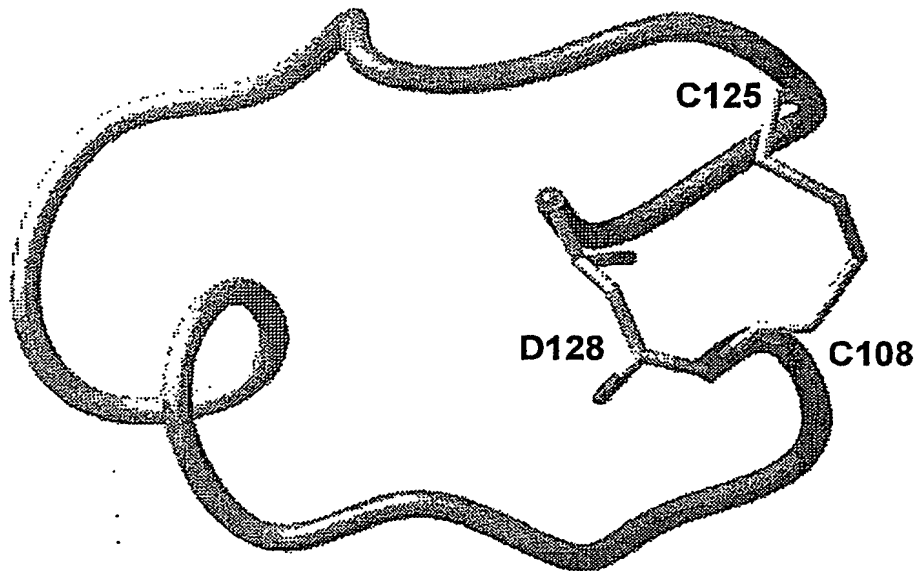


Figure 4



PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference H 2131 PCT S3	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 03/ 06930	International filing date (day/month/year) 30/06/2003	(Earliest) Priority Date (day/month/year) 08/07/2002
Applicant GENEPROT, INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☒ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☒ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/47 C07K16/00 G01N33/53 A61K39/00 A61K38/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, SEQUENCE SEARCH, CHEM ABS Data, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ✓	WO 02 13857 A (EGYED ALENA; FRITZ JOERG (AT); MATTNER FRANK (AT); BUSCHLE MICHAEL) 21 February 2002 (2002-02-21) SEQ ID NO:11 figure 1	1-13
X ✓	WO 02 09738 A (MCANULTY JONATHAN F; REID TED W (US); MURPHY CHRISTOPHER J (US)) 7 February 2002 (2002-02-07) SEQ ID NO:32 page 27; table 1	1-13
X ✓	US 6 103 888 A (HIRATA MICHIMASA ET AL) 15 August 2000 (2000-08-15) cited in the application SEQ ID NO:2 column 29; figure 10	1-13

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

14 October 2003

Date of mailing of the international search report

05/11/2003

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, indication, where appropriate, of the relevant passages	Relevant to claim No.
X ✓	<p>SORENSEN OLE ET AL: "The human antibacterial cathelicidin, hCAP-18, is bound to lipoproteins in plasma" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 274, no. 32, 6 August 1999 (1999-08-06), pages 22445-22451, XP002257545 ISSN: 0021-9258 page 22445; figure 7; table II page 22450, column 1; paragraph 1 page 22451, column 1, paragraph 2 -----</p>	1-13

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 9 to 13 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 0213857	A	21-02-2002	AU	8981301 A	25-02-2002
			CA	2418854 A1	21-02-2002
			WO	0213857 A2	21-02-2002
			EP	1309345 A2	14-05-2003
<hr/>					
WO 0209738	A	07-02-2002	AU	7907301 A	13-02-2002
			CA	2417331 A1	07-02-2002
			EP	1305040 A1	02-05-2003
			WO	0209738 A1	07-02-2002
			US	2002090369 A1	11-07-2002
<hr/>					
US 6103888	A	15-08-2000	AU	4682593 A	14-02-1994
			EP	0746605 A1	11-12-1996
			JP	8504085 T	07-05-1996
			WO	9402589 A1	03-02-1994
			US	5618675 A	08-04-1997